Duke Energy South Bay LLC

316(b) Proposal for Information Collection for South Bay (San Diego) Power Plant

Submitted In Compliance with 316(b) Phase II Regulatory Requirements

November 8, 2005

Submitted to:

Regional Water Quality Control Board
San Diego Region
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San Diego, CA 92123-4340

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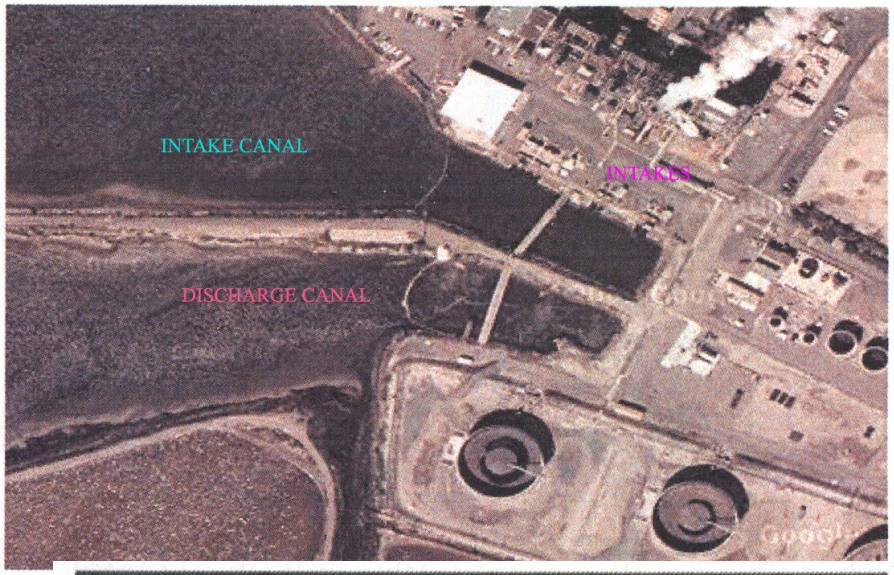
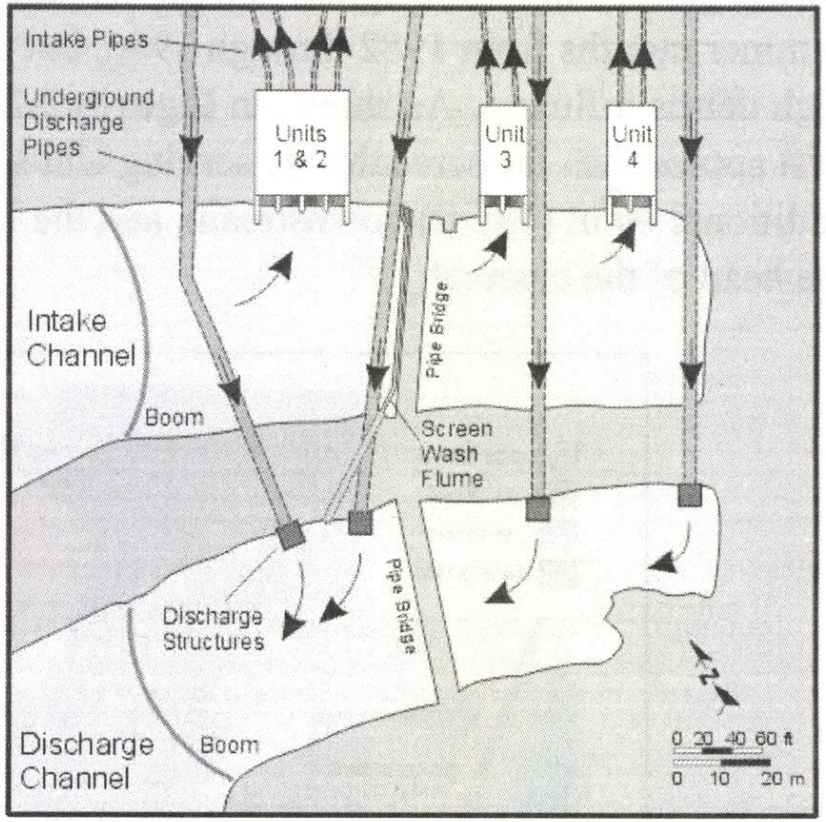




SOUTH BAY

Intake Baseline:

1. EPA: "opening of cooling water intake structure, and face of standard 3/8 x 3/8 in. traveling screen, is located parallel to shoreline and near surface of the source water body"

2. SB: Intake vol. – Impingement and Entrainment Baseline:
- -previous 5 years based on impingement and entrainment
- -**or** intake volume? (PIC implies former – p. 5)
  - Why not permitted vol.?
  - If new permit based on previous performance, can go to max. vol. after permit and true impacts will not be addressed for 5 years.

3. EPA: Intake velocity of 0.5 ft./sec. or less. Where?
- -Problems with defining intake, especially if water first comes in through pipe or channel that increases juvenile and adult fish abundance and, therefore, impingement.
- -SB exceeds 0.5 ft./sec. across traveling screens. What will be done?
  "Use recent impingement studies to evaluate <u>feasibility and cost benefit</u> of intake technologies to reduce impingement." = probably hope to not do anything??

4. SB: calculate MGD for 1 Dec. 98 – 30 Sept. 2003, but plan to use 2002 – 2006 as baseline.

Existing Credits SB:

1. Unit 4 will be < 15% capacity during the 2002-2006 period so entrainment standard would not apply to this intake.

BUT still impacting as all units withdrawing water from same water body?

2. "Credits" for

- existing intakes with 1/8 x 1 in. mesh
- intake channel.

BUT are these credits **or** debits?

-How will it be known if they are "debits?"

- How deal with "debits?"
- If credits, how determine percent reduction? Might reduce entrainment but increase impingement.

3. "Credits" for fish return system

BUT fish stuck against screen, lifted, blasted with high pressure water, travel down a rusty half pipe with shell debris while being attacked by birds, and then dumped into the hot water discharge.

- efficacy determined by survival (2 hrs) after being removed from half pipe and placed in aquaria. Does this test survival under natural conditions and relative to fish that have not been abused? Relative fecundity? Similar questions apply to entrainment survival.

Existing Credits SB (cont. 2)

4. Credit for reuse of cooling water (that part of discharged water that re-enters intake.

- will do oceanographic sampling/modeling to determine how much this is.

BUT is this "re-used" water sterile? Repopulation rates?

(begs the question of ecological baseline – ETM in degraded environments may be ok in terms of Proportional Mortality, but if use for HPF, isn't actual abundance important???)

Potential New Reduction SB:

1. Improve fish return technology

BUT issues in Existing Credits 3. above, especially survival no matter what.

2. Reduce intake vol. of Unit 4.

BUT conflict with Existing Credits 1. above?

3. Wedge wire and Fine Mesh Screens.

Space? How well work? Trade offs between impingement and entrainment?

General: **DOES** it make sense to continue to separate impingement and entrainment and have different standards? Better to treat 316b as "all living things in the intake water?"

Compensation:

2. Possibilities: eel grass meadows, wetlands, fish hatchery.

BUT

- How match to impacts? (presumably using recent 316b and HPF?)
- How and who pays for monitoring for success?

General: should fish hatcheries be taken off the compensation table?

Related Issues SB:

1. Will look at **Cost vs. Cost in Site Specific Demonstration**

(EPA estimated ~$75,000 for impingement and ~$57,000 for entrainment for total of ~$132,000 vs. actual cost of compliance?)

BUT what does this mean? If actual > EPA, don't need to do it?

2. Will look at **Cost vs. Benefit**

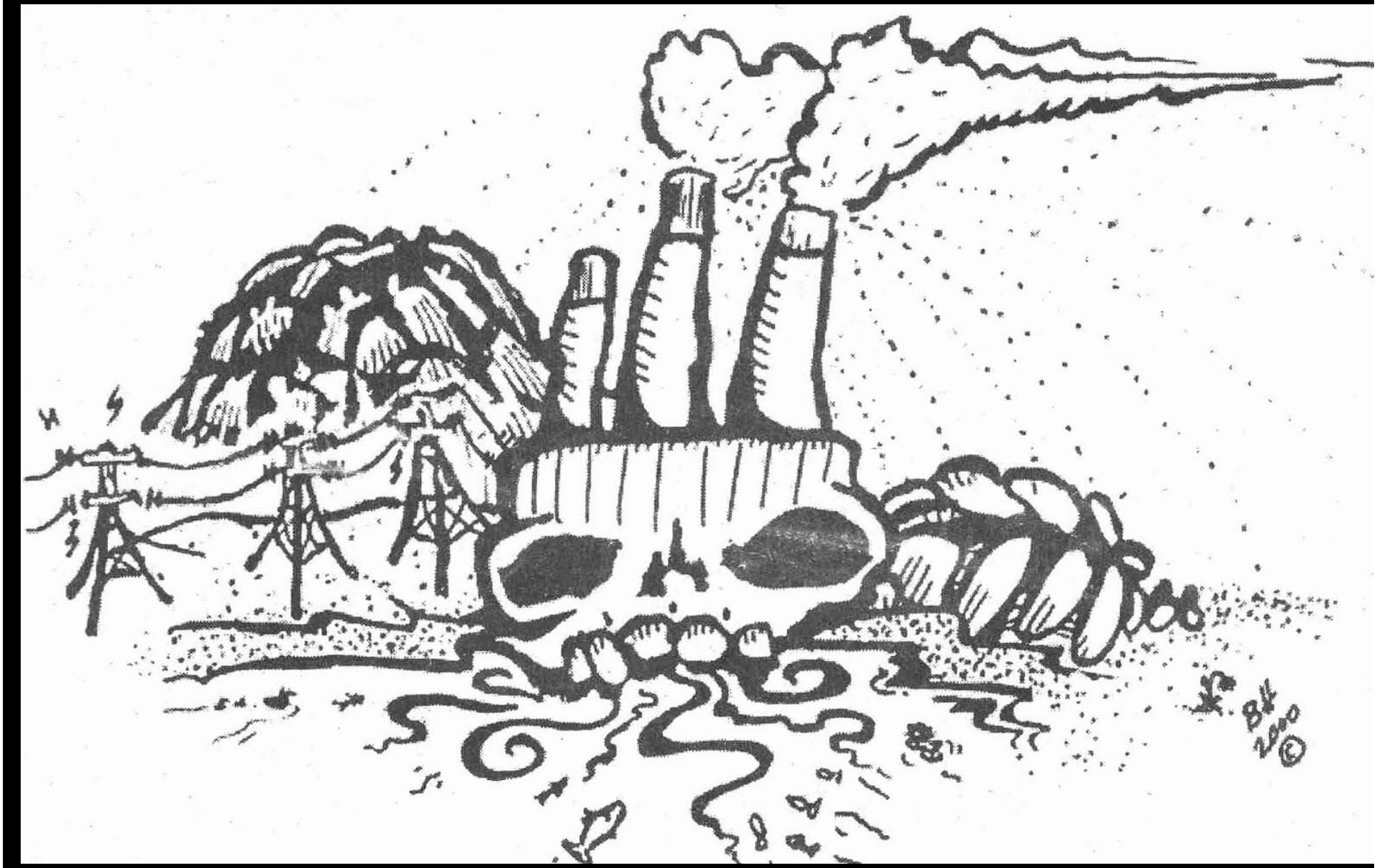
BUT who will do this, evaluate it, and decide what to do?

3. May retire all units in 2009.

BUT "and the check is also in the mail."

- How will this affect Phase II compliance?
- Existing, documented thermal and entrainment impact?
- Will it cause **DDN (D**elay and **D**o **N**othing) and just compensate lawyers and waste Board, Tech Work Group, etc. time **while the environment continues to be degraded** ---????

THE "ENVIROS" ARE WATCHING



AND SOME ARE BECOMING MORE CREDIBLE